

# **SHORT TERM ELECTRICITY LOAD FORECASTING USING ARTIFICIAL NEURAL NETWORK (ANN)**

by

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## ABSTRACT

This paper has presents a study of electricity load forecasting demand by using artificial neural network (ANN). Generally, there are three levels of processing forecasting data using artificial neural network (ANN) which are input layer, hidden layer and output layer. This method was developed using MATLAB software which produced the accurate result of this load forecasting. Mean Absolute Percentage Error (MAPE) was applied to show the differences between predicted value and actual load data. The study forecasts the amount of consumed in the next 24-hours. Table of historical hourly loads of DUKE, USA from 26<sup>th</sup> March 2012 until 4<sup>th</sup> July 2012 was used in this paper. Forecasting load demand is very important for the operation of generating electricity supply companies because it helps to make decisions to generate enough power electric to consumer as well as to control operation of electric usage of the company's infrastructure.

*Keywords-component; load Forecasting; Artificial Neural Network (ANN); Electric Power; MAPE;*

## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENT</b> .....	<b>i</b>
<b>ABSTRACT</b> .....	<b>ii</b>
<b>LIST OF FIGURES</b> .....	<b>v</b>
<b>LIST OF TABLES</b> .....	<b>vi</b>
<b>LIST OF ABBREVIATIONS</b> .....	<b>vii</b>
<b>CHAPTER 1: INTRODUCTION</b> .....	<b>1</b>
1.1 Background of Study.....	1
1.2 Problem Statement .....	2
1.3 Objectives.....	3
1.4 Scope of Work.....	3
1.5 Thesis Overview.....	4
<b>CHAPTER 2: LITERATURE REVIEW</b> .....	<b>5</b>
2.1 Introduction .....	5
2.1.1 Purpose of load forecasting .....	6
2.2 Power System Load.....	6
2.3 Supplies .....	9
2.4 Loads .....	10
2.5 Load Residential Power Systems .....	11
2.6 Load Commercial Power Systems .....	12
2.7 Load Management.....	13
2.8 Previous methods .....	15
2.8.1 Regression .....	15
2.8.2 Time Series.....	15
2.8.3 Expert System.....	16
2.8.4 Fuzzy Logic .....	16

2.8.5 Support Vector Machine.....	16
<b>CHAPTER 3: METHODOLOGY.....</b>	<b>17</b>
3.1 Introduction.....	17
3.2 Artificial Neural Network.....	17
3.2.1 Network Architecture.....	18
3.2.2 Training.....	20
3.2.3 Testing.....	21
3.3 Data Analysis.....	21
3.3.1 Data Pre-processing and Scaling.....	22
3.4 Post-Processing.....	22
3.5 Error Analysis.....	23
<b>CHAPTER 4: RESULTS AND DISCUSSION.....</b>	<b>27</b>
4.1 Introduction.....	27
4.2 ANN Result Analysis.....	30
<b>CHAPTER 5: CONCLUSION AND RECOMMENDATION.....</b>	<b>32</b>
5.1 Conclusion.....	32
5.2 Recommendation.....	32
<b>REFERENCES.....</b>	<b>33</b>

**APPENDIX A: HISTORICAL HOURLY LOAD DATA OF DUKE**

**APPENDIX B: MATLAB PROGRAMMING**

**APPENDIX C: TECHNICAL PAPER**